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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,003	02/27/2004	Hiroshi Miyawaki	NY-KIT-365-US	6887
24972	7590	01/20/2006	EXAMINER	
FULBRIGHT & JAWORSKI, LLP 666 FIFTH AVE NEW YORK, NY 10103-3198			LEE, GUNYOUNG T	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No.	Applicant(s)	
	10/789,003	MIYAWAKI ET AL.	
	Examiner	Art Unit	
	Gunyoung T. Lee	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/08/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on November 11, 2005 has been entered:
 - Claims 1, 6 and 7 have been amended;
 - Claim 5 has been cancelled.

Response to Arguments

2. Applicant's arguments regarding newly amended claim 1-4 and 6-7 filed on November 11, 2005 have been fully considered.
3. Applicant's arguments (Remarks, pages 4-5) regarding the newly amended claim 1 address that the amended features "heat generating controlling means" and "warm-up controlling means" are not anticipated by Yazawa et al (US 5,870,128). However, Yazawa et al. disclose the LEDs and the chip resistors which are inherently generating thermal energy (heat) while power is supplied to them. Thus, it is obvious that different levels of power can be supplied to the LEDs and the chip resistors thereby producing heat generating means (Fig. 1, a, b) to produce a desired level of thermal energy. In addition, it is well known in the field of thermal dynamics to one of ordinary skill in the art that the warm-up process occurs inherently at a thermal energy generating electrical components (including LEDs and chip resistor) when a power supply is happened.
4. The newly amended claim 1 is unpatentable over Yazawa et al (US 5,870,128) in view of Ryan (US 2004/0120156) which are cited in the rejection of claim 5 in the Non-

Final Office action dated on August 9, 2005. A rejection on the merits using Yazawa et al (US 5,870,128) and Ryan (US 2004/0120156) follows on page 4.

5. In response to applicant's argument (Remarks, page 4) that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

6. In response to applicant's arguments (Remarks, page 5) about the functionalities of the apparatus (e.g. "continuously supplying the maximum power" on page 5 of Remarks), it is clearly cited in the MPEP that the functional statement which does not direct to structural limitations of an apparatus has not been given any patentable weight (see MPEP § 2114).

7. In response to applicant's arguments (Remarks, page 6) about the motivation for combining of the prior art to produce the claimed invention, it is clearly cited in the MPEP that the motivation for combining or modifying the teachings of the prior art to

produce the claimed invention does not need to come from the reference itself (see MPEP § 2143 - § 2143.03).

Claim Objections

8. Claim 3 is objected to because of the following informality: the word "bounding" in line 3 of claim 3 is misspelled. Appropriate correction is required.

9. The newly amended claim 6 is objected to because the deleted matter "temperature determining means for determining a temperature of the substrate," is not shown in the newly amended claim. In all amended claims, the text of any added subject matter must be shown by underlining the added text, and the text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. See MPEP § 714 (c). Appropriate correction is required.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. The claims must be given their broadest reasonable interpretation. See MPEP § 2111.

13. A preamble is not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure (see MPEP § 2111). The information in the preamble is not further given any patentable weight.

14. The functional statement that does not direct to structural limitations of an apparatus has not been given any patentable weight (see MPEP § 2114). The functional statements in the claims are not further given any patentable weight.

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15. Claims 1-4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yazawa et al. (US 5,870,128) as applied to claim 1 above, and further in view of Ryan (US 6,964,501).

16. In regards to claims 1-2 and 6-7, Yazawa et al. disclose a light emitting device assembly having:

- A substrate formed of aluminum metal having high heat conductivity (Fig. 2(II), 7) (col. 3, lines 37-39);
- A plurality of light emitting diodes (LED's) (Fig. 2(II), 1);
- A plurality of chip resistors (col. 3, line 26);
- Wherein the chip resistors (Fig. 1, 4) are (inherently) generating heat while the power is being supplied to the chip resistors;
- Light emission controlled means (Fig. 1, 4) (col. 3, lines 25-26)
- Heat generation controlling means (Fig. 1, a, b) through which different levels of power can be (inherently) supplied to the LEDs and the chip resistors to generate a desired level of thermal energy;
- Warm-up controlling means (Fig. 1, a, b) through which power is supplied to the LEDs (1) and the chip resistors, and the warm-up process occurs (obviously) at the beginning of power supply;
- Wherein the plural LEDs (Fig. 1, 1) are arranged in the form of an array on the substrate and a plurality of the chip resistors (placed in 4 of Fig. 1) (col. 3, line 26) are arranged linearly along the array of LEDs (1);
- An insulating layer (Fig. 2(II), 3) formed on the substrate (7);

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- A printed circuit (Fig. 1, 2) formed on the top of the insulating layer (3);
- A bonding wiring (Fig. 1, 6) connected between the printed circuit (2) and the LEDs (1) (col. 3, liens 34-37).

However, Yazawa et al. do not expressly disclose:

- A temperature determining means which is a thermistor;
- A radiator;
- A fan.

In regards to a radiator, fan and temperature determining means (thermistor), Ryan discloses a LED lighting assembly having:

- A radiator (Fig. 1, 3) coupled (2, 7) with the substrate (11);
- A temperature determining means (thermistor) (Fig. 1, 9) (p. 4, paragraph 63, lines 1-3) to determine the temperature of the substrate (11) (p. 4, paragraph 62, lines 7-10);
- A fan for feeding cooling air to the radiator (p. 3, paragraph 49, lines 6-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the radiator, fan and thermistor of Ryan for the light emitting device assembly of Yazawa et al. to actively control the thermal energy in the system and to keep the temperature within a desired range. This will increase the performance of lighting elements, which is very desirable in the design of an illumination system with temperature sensitive lighting elements such as LEDs.

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17. In regards to claim 3, Yazawa et al. disclose the invention substantially as claimed except for a solder bonding to fix the chip resistors. It is well known in the art at the time of the invention was made to use a solder bonding for mounting a resistor on a circuit board. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a solder bonding to fix the chip resistors for the light emitting device assembly of Yazawa et al. to provide excellent electrical conductivity and a rigid metal bonding at a relative low melting temperature which avoid any possible damage to the neighboring components on the circuit.

18. In regards to claim 4, Yazawa et al. disclose the invention substantially as claimed except for LEDs which are "adapted for irradiating at least three kinds of beams of red, green and blue. It is well known and available knowledge to one of ordinary skill in the art that light-emitting diodes are commercially available in various colors including red, green and blue. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the LEDs with red, green and blue colors for the light emitting device assembly of Yazawa et al. to provide beams with different wave lengths or at different frequencies, which will increase the performance of the device and enlarge the applicable area. Further, it has been held that the recitation that an element is "adapted for" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Conclusion

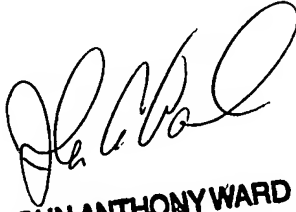
19. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gunyoung T. Lee whose telephone number is (571) 272-8588. The examiner can normally be reached between 7:30 - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached at (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GTL
1/12/2006


JOHN ANTHONY WARD
PRIMARY EXAMINER